

(ii) an intake opening; and
(iii) upstream and downstream portions relative to said intake opening, wherein the extruder has a length-to-diameter ratio of less than or equal to 40, the shafts of the extruder are designed with a double lead in a degassing zone of the extruder, and with a triple lead in a pressure build-up zone of the extruder, each of said degassing zone and said pressure build-up zone being down-stream from said intake opening, and said pressure build-up zone being further down-stream than said degassing zone.

24. The apparatus of Claim 23 wherein the length-to-diameter ratio is from 35 to 40.

25. The apparatus of Claim 23 wherein said extruder further comprises a cooling device defining a cooling zone.

26. The apparatus of Claim 25 wherein the shafts are designed with a triple lead in the cooling zone.

27. The apparatus of Claim 23 wherein kneading elements are disposed immediately downstream from said intake opening, said kneading elements being located between feed elements of said shafts.

28. The apparatus of Claim 23 wherein said extruder comprises a plurality of degassing zones located downstream from said intake opening, each of said degassing zones having an exhausting device connected thereto.

29. The apparatus of Claim 28 wherein the shafts have a triple-lead profile in a region between two of said degassing zones.

30. The apparatus of Claim 28 wherein said extruder further comprises an agent inlet located in a region between two of said degassing zones.

31. The apparatus of Claim 28 wherein said extruder comprises first, second and third degassing zones, and an entraining agent inlet located between the second and third degassing zones.

32. The apparatus of Claim 23 wherein a backward degassing vent opening is located upstream from said intake opening.

33. The apparatus of Claim 28 wherein said plurality of degassing zones comprises a last degassing zone located furthest downstream from said intake opening, said extruder further comprising an additive admixing charging device located in said last degassing zone.

34. A process for degassing a plastic material comprising:

(a) providing a double-shaft extruder comprising,

- (i) two shafts rotating in the same direction and meshing with one another,
- (ii) an intake opening, and
- (iii) upstream and downstream portions relative to said intake opening,

wherein the extruder has a length-to-diameter ratio of less than or equal to 40, the shafts of the extruder are designed with a double lead in a degassing zone of the extruder, and with a triple lead in a pressure build-up zone of the extruder, each of said degassing zone and said pressure build-up zone being down-stream from said intake opening, and said pressure build-up zone being further down-stream than said degassing zone; and

(b) feeding said plastic material into said intake opening.

35. The process of Claim 34 wherein the length-to-diameter ratio of the extruder is from 35 to 40.

36. The process of Claim 34 wherein said extruder further comprises a cooling device defining a cooling zone.

37. The process of Claim 36 wherein the shafts are designed with a triple lead in the cooling zone.

38. The process of Claim 34 wherein said extruder comprises a plurality of degassing zones located downstream from said intake opening, each of said degassing zones having an exhausting device connected thereto, said degassing zones defining a plurality of forward degassing zones.

39. The process of Claim 38 wherein said extruder further comprises a backward degassing vent opening located upstream from said intake opening.

40. The process of Claim 38 wherein said extruder comprises first, second and third degassing zones, the absolute pressure generated by the exhausting device of said first degassing zone being from 0.5 to 1.5 bar, the absolute pressure generated by the exhausting device of said second degassing zone being from 0.03 to 1.9 bar, and the degassing pressure generated by the exhausting device of said third degassing zone being from 0.001 to 0.03 bar.

41. The process of Claim 34 further comprising admixing an entraining agent into the plastic material within said extruder.

42. The process of Claim 38 wherein said extruder comprises first, second and third degassing zones and an entraining agent is introduced into the plastic material within said extruder between said second and third degassing zones.

43. The process of Claim 42 wherein said entraining agent is nitrogen.

44. The process of Claim 43 wherein the shafts of said extruder are rotated at a speed of less than 390 revolutions per minute, and said entraining agent is introduced into said extruder at a volume rate of 2 to 10 Nm³/h.

45. The process of Claim 38 wherein said plurality of degassing zones comprises a last degassing zone located furthest downstream from said intake opening, and said pressure build-up zone is adjoined to said last degassing zone.

46. The process of Claim 34 wherein said plastic material is a high-molecular polycarbonate solution.--